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EXAMINER

BELL, MELTIN

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/835,637

Applicant(s)

CHIEN, CHUNG-FANG

Examiner

Meltin Bell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 8-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This action is responsive to application **09/835,637** filed **04/17/2001** as well as the Specification, Drawing Corrections and Amendment filed 6/28/04. Claims 1, 3-6 and 8-32 filed by the applicant have been entered and examined. Claims 2 and 7 have been canceled. An action on the merits of claims 1, 3-6 and 8-32 appears below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in the prior Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Original claims 1-8, 10-11 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by *Munson et al* U.S. Patent Number 5,035,625 "Computer game teaching method and system" (July 30, 1991).

Regarding claim 1:

Munson et al teaches,

- providing a simple question to a learner (Fig. 1A, step 40; column 3, lines 42-47, "The N records...are hard questions")
- making a decision on whether a hint is to be provided to the learner (Fig. 1B, steps 54, 58, 62, 80, 86)
- providing a hint to the learner if the decision is "yes" (Fig. 1B, steps 56, 60, 64)

- receiving a learner-given answer from the learner (Fig. 1B, step 70)
- checking whether the learner-given answer is correct (Fig. 1B, step 80)

Regarding claim 2:

The rejection of claim 2 is similar to that for claim 1 as recited above since the stated limitations of the claim are set forth in the reference.

Regarding claim 3:

The rejection of claim 3 is similar to that for claim 1 as recited above since the stated limitations of the claim are set forth in the reference.

Regarding claim 4:

The rejection of claim 4 is similar to that for claim 1 as recited above since the stated limitations of the claim are set forth in the reference.

Regarding claim 5:

The rejection of claim 5 is similar to that for claim 1 as recited above since the stated limitations of the claim are set forth in the reference.

Regarding claim 6:

Munson et al teaches,

- providing at least one simple question of a grade to a learner (Fig. 1A, step 40; column 3, lines 42-47, "The N records...are hard questions")
- receiving a learner-given answer from the learner (Fig. 1B, step 70)
- checking whether the learner-given answer is correct (Fig. 1B, step 80)
- returning to the step of providing at least one simple question based on the determination whether the learner-given answer is correct (Fig. 1B, step 114)

Regarding claim 7:

The rejection of claim 7 is similar to that for claim 6 as recited above since the stated limitations of the claim are set forth in the reference.

Regarding claim 8:

Munson et al teaches,

- checking whether the grade to which the first simple question belongs reaches the highest grade if the response is "easy" (column 5, lines 19-26, "Another method of...their educational level")

Regarding claim 10:

The rejection of claim 10 is similar to that for claim 6 as recited above since the stated limitations of the claim are set forth in the reference.

Regarding claim 11:

Munson et al teaches,

- checking whether the grade to which the first simple question belongs reaches the lowest grade if the response is "difficult" (column 5, lines 19-26, "Another method of...their educational level")

Regarding claim 14:

The rejection of claim 14 is similar to that for claim 6 as recited above since the stated limitations of the claim are set forth in the reference.

Regarding claim 15:

Munson et al teaches,

- evaluating the score of the learner before returning to the step of providing simple questions (Fig. 1B, step 110; column 2, lines 41-50, "At each pause... further positive responses")

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in the prior Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Original claims 9, 12-13, 16-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Munson et al* in view of *Parry et al* U.S. Patent Number 6,077,085 "Technology assisted learning" (June 20, 2000).

Regarding claim 9:

Munson et al teaches,

- providing at least one simple question of a grade to a learner (Fig. 1A, step 40; column 3, lines 42-47, "The N records...are hard questions")
- receiving a learner-given answer from the learner (Fig. 1B, step 70)
- checking whether the learner-given answer is correct (Fig. 1B, step 80)

- returning to the step of providing at least one simple question based on the determination whether the learner-given answer is correct (Fig. 1B, step 114)
- checking whether the grade to which the first simple question belongs reaches the highest grade if the response is "easy" (column 5, lines 19-26, "Another method of...their educational level")

However, *Munson et al* doesn't explicitly teach the second simple question is provided from a higher grade than the first simple question is if the grade to which the first simple questions belongs is not the highest grade while *Parry et al* teaches,

- the second simple question is provided from a higher grade than the first simple question is if the grade to which the first simple questions belongs is not the highest grade (column 16, lines 8-36, "To determine whether...one of them"; Figs. 4-5, 14-15; column 16, lines 51-67, "Once it has...student's comprehension level")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Optimizing the level of challenge for all learners (*Parry et al*, Abstract, "The systems, methods...for all students")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Munson et al* as taught by *Parry et al* for the purpose of optimizing the level of challenge for all learners.

Regarding claim 12:

Munson et al teaches,

- providing at least one simple question of a grade to a learner (Fig. 1A, step 40; column 3, lines 42-47, "The N records...are hard questions")
- receiving a learner-given answer from the learner (Fig. 1B, step 70)
- checking whether the learner-given answer is correct (Fig. 1B, step 80)
- returning to the step of providing at least one simple question based on the determination whether the learner-given answer is correct (Fig. 1B, step 114)
- checking whether the grade to which the first simple question belongs reaches the lowest grade if the response is "difficult" (column 5, lines 19-26, "Another method of...their educational level")

However, *Munson et al* doesn't explicitly teach the second simple questions is provided from a lower grade than the first simple questions is if the grade to which the first simple questions belongs is not the lowest grade while *Parry et al* teaches,

- the second simple questions is provided from a lower grade than the first simple questions is if the grade to which the first simple questions belongs is not the lowest grade (column 24, lines 11-40, "FIG. 15 shows...only one step")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Optimizing the level of challenge for all learners (*Parry et al*, Abstract, "The systems, methods...for all students")

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Munson et al* as taught by *Parry et al* for the purpose of optimizing the level of challenge for all learners.

Regarding claim 16:

Munson et al teaches,

- providing at least one simple question of a grade to a learner (Fig. 1A, step 40; column 3, lines 42-47, "The N records...are hard questions")
- receiving a learner-given answer from the learner (Fig. 1B, step 70)
- checking whether the learner-given answer is correct (Fig. 1B, step 80)
- returning to the step of providing at least one simple question based on the determination whether the learner-given answer is correct (Fig. 1B, step 114)
- checking whether the grade to which the first simple question belongs reaches the lowest grade if the response is "difficult" (column 5, lines 19-26, "Another method of...their educational level")

However, *Munson et al* doesn't explicitly teach checking whether the grade to which the first plurality of simple questions belong reaches the highest grade if the score is better than a predetermined upper criterion while *Parry et al* teaches,

- checking whether the grade to which the first plurality of simple questions belong reaches the highest grade if the score is better than a predetermined upper criterion (column 24, lines 11-40, "FIG. 15 shows...only one step")
- the second plurality of simple question are provided from a higher grade than the first plurality of simple questions are if the grade to which the first simple questions belongs

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is not the highest grade (column 16, lines 8-36, "To determine whether...one of them"; Figs. 4-5, 14-15; column 16, lines 51-67, "Once it has... student's comprehension level")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Optimizing the level of challenge for all learners (*Parry et al*, Abstract, "The systems, methods...for all students")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Munson et al* as taught by *Parry et al* for the purpose of optimizing the level of challenge for all learners.

Regarding claim 17:

The rejection of claim 17 is the same as that for claim 16 as recited above since the stated limitations of the claims are set forth in the references.

Regarding claim 18:

Munson et al teaches,

- providing at least one simple question of a grade to a learner (Fig. 1A, step 40; column 3, lines 42-47, "The N records...are hard questions")
- receiving a learner-given answer from the learner (Fig. 1B, step 70)
- checking whether the learner-given answer is correct (Fig. 1B, step 80)
- returning to the step of providing at least one simple question based on the determination whether the learner-given answer is correct (Fig. 1B, step 114)

- checking whether the grade to which the first simple question belongs reaches the lowest grade if the response is "difficult" (column 5, lines 19-26, "Another method of...their educational level")

However, *Munson et al* doesn't explicitly teach the second plurality of simple questions are provided from the same grade as the first plurality of simple questions are if the score is between pre-determined upper and lower criteria while *Parry et al* teaches,

- the second plurality of simple questions are provided from the same grade as the first plurality of simple questions are if the score is between pre-determined upper and lower criteria (column 24, lines 11-40, "FIG. 15 shows...only one step"; column 16, lines 8-36, "To determine whether...one of them"; Figs. 4-5, 14-15; column 16, lines 51-67, "Once it has...student's comprehension level")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Optimizing the level of challenge for all learners (*Parry et al*, Abstract, "The systems, methods...for all students")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Munson et al* as taught by *Parry et al* for the purpose of optimizing the level of challenge for all learners.

Regarding claim 19:

Munson et al teaches,

- providing at least one simple question of a grade to a learner (Fig. 1A, step 40; column 3, lines 42-47, "The N records...are hard questions")

- receiving a learner-given answer from the learner (Fig. 1B, step 70)
- checking whether the learner-given answer is correct (Fig. 1B, step 80)
- returning to the step of providing at least one simple question based on the determination whether the learner-given answer is correct (Fig. 1B, step 114)
- checking whether the grade to which the first simple question belongs reaches the lowest grade if the response is "difficult" (column 5, lines 19-26, "Another method of...their educational level")

However, *Munson et al* doesn't explicitly teach checking whether the grade to which the first plurality of simple questions belong reaches the lowest grade if the score is worse than a predetermined upper criterion while *Parry et al* teaches,

- checking whether the grade to which the first plurality of simple questions belong reaches the lowest grade if the score is worse than a predetermined upper criterion (column 24, lines 11-40, "FIG. 15 shows...only one step"; column 16, lines 8-36, "To determine whether...one of them"; Figs. 4-5, 14-15; column 16, lines 51-67, "Once it has...student's comprehension level")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Optimizing the level of challenge for all learners (*Parry et al*, Abstract, "The systems, methods...for all students")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Munson et al* as taught by *Parry et al* for the purpose of optimizing the level of challenge for all learners.

Regarding claim 20:

The rejection of claim 20 is the same as that for claim 19 as recited above since the stated limitations of the claim are set forth in the references.

Regarding claim 22:

Munson et al teaches,

- providing at least one simple question of a grade to a learner (Fig. 1A, step 40; column 3, lines 42-47, "The N records...are hard questions")
- receiving a learner-given answer from the learner (Fig. 1B, step 70)
- checking whether the learner-given answer is correct (Fig. 1B, step 80)
- returning to the step of providing at least one simple question based on the determination whether the learner-given answer is correct (Fig. 1B, step 114)
- checking whether the grade to which the first simple question belongs reaches the lowest grade if the response is "difficult" (column 5, lines 19-26, "Another method of...their educational level")

However, *Munson et al* doesn't explicitly teach receiving a response from the learner if the score is better than a predetermined upper criterion while *Parry et al* teaches,

- receiving a response from the learner if the score is better than a predetermined upper criterion (column 16, lines 8-36, "To determine whether...one of them"; Figs. 4-5, 14-15; column 16, lines 51-67, "Once it has...student's comprehension level"; column 24, lines 11-40, "FIG. 15 shows...only one step")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Optimizing the level of challenge for all learners (*Parry et al*, Abstract, "The systems, methods...for all students")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Munson et al* as taught by *Parry et al* for the purpose of optimizing the level of challenge for all learners.

Regarding claim 23:

The rejection of claim 23 is the same as that for claim 22 as recited above since the stated limitations of the claim are set forth in the references.

Regarding claim 24:

The rejection of claim 24 is the same as that for claim 23 as recited above since the stated limitations of the claim are set forth in the references.

Regarding claim 25:

The rejection of claim 25 is the same as that for claim 22 as recited above since the stated limitations of the claim are set forth in the references.

Regarding claim 26:

Munson et al teaches,

- providing at least one simple question of a grade to a learner (Fig. 1A, step 40; column 3, lines 42-47, "The N records...are hard questions")
- receiving a learner-given answer from the learner (Fig. 1B, step 70)
- checking whether the learner-given answer is correct (Fig. 1B, step 80)
- returning to the step of providing at least one simple question based on the determination whether the learner-given answer is correct (Fig. 1B, step 114)

- checking whether the grade to which the first simple question belongs reaches the lowest grade if the response is "difficult" (column 5, lines 19-26, "Another method of...their educational level")

However, *Munson et al* doesn't explicitly teach receiving a response from the learner if the score is worse than a predetermined lower criterion while *Parry et al* teaches,

- receiving a response from the learner if the score is worse than a predetermined lower criterion (column 16, lines 8-36, "To determine whether...one of them"; Figs. 4-5, 14-15; column 16, lines 51-67, "Once it has...student's comprehension level"; column 24, lines 11-40, "FIG. 15 shows...only one step")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Optimizing the level of challenge for all learners (*Parry et al*, Abstract, "The systems, methods...for all students")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Munson et al* as taught by *Parry et al* for the purpose of optimizing the level of challenge for all learners.

Regarding claim 27:

The rejection of claim 27 is the same as that for claim 26 as recited above since the stated limitations of the claim are set forth in the references.

Regarding claim 28:

The rejection of claim 28 is the same as that for claim 27 as recited above since the stated limitations of the claim are set forth in the references.

Regarding claim 30:

The rejection of claim 30 is the same as that for claim 26 as recited above since the stated limitations of the claim are set forth in the references.

Regarding claim 31:

Munson et al teaches,

- providing at least one simple question of a grade to a learner (Fig. 1A, step 40; column 3, lines 42-47, "The N records...are hard questions")
- receiving a learner-given answer from the learner (Fig. 1B, step 70)
- checking whether the learner-given answer is correct (Fig. 1B, step 80)
- returning to the step of providing at least one simple question based on the determination whether the learner-given answer is correct (Fig. 1B, step 114)
- checking whether the grade to which the first simple question belongs reaches the lowest grade if the response is "difficult" (column 5, lines 19-26, "Another method of...their educational level")

However, *Munson et al* doesn't explicitly teach retrieving the correct answer for the simple question provided to the learner before the step of checking whether the learner-given answer is correct while *Parry et al* teaches,

- retrieving the correct answer for the simple question provided to the learner before the step of checking whether the learner-given answer is correct (column 16, lines 8-36, "To determine whether...one of them"; Figs. 4-5, 14-15; column 16, lines 51-67, "Once it has...student's comprehension level"; column 24, lines 11-40, "FIG. 15 shows...only one step")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Optimizing the level of challenge for all learners (*Parry et al*, Abstract, "The systems, methods...for all students")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Munson et al* as taught by *Parry et al* for the purpose of optimizing the level of challenge for all learners.

Original claims 13, 16-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Munson et al* in view of *Jerinic et al* "OBOA model of explanation module in intelligent tutoring shell" (June 1997).

Regarding claim 13:

Munson et al teaches,

- providing at least one simple question of a grade to a learner (Fig. 1A, step 40; column 3, lines 42-47, "The N records...are hard questions")
- receiving a learner-given answer from the learner (Fig. 1B, step 70)
- checking whether the learner-given answer is correct (Fig. 1B, step 80)
- returning to the step of providing at least one simple question based on the determination whether the learner-given answer is correct (Fig. 1B, step 114)
- checking whether the grade to which the first simple question belongs reaches the lowest grade if the response is "difficult" (column 5, lines 19-26, "Another method of...their educational level")

However, *Munson et al* doesn't explicitly teach explaining the concept of the simple question to the learner if the grade to which the first simple question belongs reaches the lowest grade while *Jerinic et al* teaches,

- explaining the concept of the simple question to the learner if the grade to which the first simple question belongs reaches the lowest grade (page 135, section 5, "The presented method...20% more cases")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Compensating for errors in the question or response expected (*Jerinic et al*, page 134, right column, paragraph 2, "The important characteristics...and his PEG[5]")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Munson et al* as taught by *Jerinic et al* for the purpose of compensating for errors in the question or response expected.

Original claims 21, 29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Munson et al* in view of *Parry et al* and further in view of *Jerinic et al*.

Regarding claim 21:

Munson et al teaches,

- providing at least one simple question of a grade to a learner (Fig. 1A, step 40; column 3, lines 42-47, "The N records...are hard questions")
- receiving a learner-given answer from the learner (Fig. 1B, step 70)
- checking whether the learner-given answer is correct (Fig. 1B, step 80)

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- returning to the step of providing at least one simple question based on the determination whether the learner-given answer is correct (Fig. 1B, step 114)
- checking whether the grade to which the first simple question belongs reaches the lowest grade if the response is "difficult" (column 5, lines 19-26, "Another method of... their educational level")

However, *Munson et al* doesn't explicitly teach checking whether the grade to which the first plurality of simple questions belong reaches the lowest grade if the score is worse than a predetermined upper criterion or explaining the concept of the simple questions to the learner if the grade to which the first plurality of simple question belong reaches the lowest grade while *Parry et al* teaches,

- checking whether the grade to which the first plurality of simple questions belong reaches the lowest grade if the score is worse than a predetermined upper criterion (column 16, lines 8-36, "To determine whether...one of them"; Figs. 4-5, 14-15; column 16, lines 51-67, "Once it has... student's comprehension level"; column 24, lines 11-40, "FIG. 15 shows...only one step")

Jerinic et al teaches,

- explaining the concept of the simple questions to the learner if the grade to which the first plurality of simple question belong reaches the lowest grade (page 135, section 5, "The presented method...20% more cases")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

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- Compensating for errors in the question or response expected (*Jerinic et al*, page 134, right column, paragraph 2, "The important characteristics...and his PEG[5]")
- Optimizing the level of challenge for all learners (*Parry et al*, Abstract, "The systems, methods...for all students")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Munson et al* as taught by *Parry et al* and *Jerinic et al* for the purpose of optimizing the level of challenge for all learners as well as compensating for errors in the question or response expected.

Regarding claim 29:

Munson et al teaches,

- providing at least one simple question of a grade to a learner (Fig. 1A, step 40; column 3, lines 42-47, "The N records...are hard questions")
- receiving a learner-given answer from the learner (Fig. 1B, step 70)
- checking whether the learner-given answer is correct (Fig. 1B, step 80)
- returning to the step of providing at least one simple question based on the determination whether the learner-given answer is correct (Fig. 1B, step 114)
- checking whether the grade to which the first simple question belongs reaches the lowest grade if the response is "difficult" (column 5, lines 19-26, "Another method of...their educational level")

However, *Munson et al* doesn't explicitly teach checking whether the grade to which the first plurality of simple questions belong reaches the lowest grade if the score is worse than a predetermined upper criterion or explaining the concept of the simple questions

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to the learner if the grade to which the first plurality of simple question belong reaches the lowest grade if the response is difficult while *Parry et al* teaches,

- checking whether the grade to which the first plurality if simple questions belong reaches the lowest grade if the score is worse than a predetermined upper criterion (column 16, lines 8-36, "To determine whether...one of them"; Figs. 4-5, 14-15; column 16, lines 51-67, "Once it has...student's comprehension level"; column 24, lines 11-40, "FIG. 15 shows...only one step")

Jerinic et al teaches,

- explaining the concept of the simple questions to the learner if the grade to which the first plurality of simple question belong reaches the lowest grade if the response is difficult (page 135, section 5, "The presented method...20% more cases")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Compensating for errors in the question or response expected (*Jerinic et al*, page 134, right column, paragraph 2, "The important characteristics...and his PEG[5]")
- Optimizing the level of challenge for all learners (*Parry et al*, Abstract, "The systems, methods...for all students")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Munson et al* as taught by *Parry et al* and *Jerinic et al* for the purpose of optimizing the level of challenge for all learners as well as compensating for errors in the question or response expected.

Regarding claim 32:

Munson et al teaches,

- providing a complex question to a learner (Fig. 1A, step 40; column 3, lines 42-47, "The N records...are hard questions")
- receiving a learner-given answer from the learner for the complex question (Fig. 1B, step 70)
- checking whether the learner-given answer for the complex question is correct (Fig. 1B, step 80)
- if the learner-given answer is incorrect, selecting one of the components of the complex question and executing the following steps (Fig. 1B, step 84) :
 - providing a simple question from the target grade in the category to which the selected component belongs (column 12, lines 28-33, "A method of...desired difficulty level")
 - receiving from the learner a learner-given answer for the simple question (Fig. 1B, step 70)
 - checking whether the learner-given answer for the simple question is correct (Fig. 1B, step 80)

However, *Munson et al* doesn't explicitly teach checking whether the grade to which the simple question belongs reaches the target grade or explaining the concept of the simple question while *Parry et al* teaches,

- if the learner-given answer for the simple question is correct, checking whether the grade to which the simple question belongs reaches the target grade and performing the following steps (column 16, lines 8-36, "To determine whether...one of them") :

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- returning to the component-selecting step if the grade to which the simple question belongs reaches the target grade (Figs. 4-5, 14-15)
- selecting a higher grade and returning to the step of providing a simple question if the grade to which the simple question belongs does not reach the target grade (column 16, lines 51-67, "Once it has... student's comprehension level")
- if the learner-given answer for the simple question is incorrect, checking whether the grade to which the simple question belongs reaches the lowest grade and performing the following steps (column 16, lines 46-49, "The current item...regressing are fulfilled"):
- selecting a lower grade and returning to the step of providing a simple question if the grade to which the simple question belongs does not reach the lowest grade (column 16, lines 37-46, "If found lacking... anxiety and frustration")

Jerinic et al teaches,

- explaining the concept of the simple question if the grade to which the simple question belongs reaches the lowest grade (page 135, section 5, "The presented method...20% more cases")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Compensating for errors in the question or response expected (*Jerinic et al*, page 134, right column, paragraph 2, "The important characteristics...and his PEG[5]")
- Optimizing the level of challenge for all learners (*Parry et al*, Abstract, "The systems, methods...for all students")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Munson et al* as taught by *Parry et al* and *Jerinic et al* for the purpose of optimizing the level of challenge for all learners as well as compensating for errors in the question or response expected.

RESPONSE TO APPLICANTS' AMENDMENT REMARKS

Specification, Drawings

Applicant(s) argue(s) that the prior Office Action has been thoroughly reviewed and that the amended specification and drawings are fully responsive for the claims to be patentable (Amendment REMARKS page 14, paragraph 1). The amendments to the drawings Figs. 1-5, 7-8, 10-11, 13 and 15 and the specification paragraphs beginning on page 5, line 11, page 8, line 5, page 8, line 10, page 8, line 15, page 8, line 20, page 9, line 9, page 9, line 25 and page 13, line 22 have been entered and examined. The objections to the drawings and specification in the prior office action are withdrawn. However, it is noted that the text in Fig. 13, step 790 is inconsistent with the description in the paragraph beginning on page 9, line 25.

Claim Rejections - 35 USC § 102

Applicant(s) argue(s) that the deleting of claims 6-32 and adding of claims 33-38 overcome the rejection of claims 1-8, 10-11 and 14-15 under 35 U.S.C. 102(b) for being anticipated by Munson US#5,035,625 (Amendment REMARKS page 14, paragraph 3).

The examiner acknowledges that claims 1, 3, 6, 8-21, 23-25 and 27-32 have been amended and claims 2 and 7 have been canceled while claims 4-5, 22 and 26 are unchanged. The applicant is encouraged to correct the examiner's understanding with regards to the new and deleted claims 6-38.

Applicant(s) argue(s) that the invention of the subject application differs from Munson in amended claim 1 by not automatically providing a hint to the student after incorrectly answering a question and in amended claim 6 by requiring the user to select the difficulty level after answering a question (Amendment REMARKS page 14, paragraph 5). Applicant's arguments have been fully considered but they are not persuasive. The examiner considers each amended claim as anticipated by and obvious over Munson's teachings in the Abstract, Figs. 1A-1B and column 3, lines 42-47. Eliminating Munson's element of automatically providing a hint to the student after incorrectly answering a question is an obvious modification within the level of ordinary skill in the art. See *In re Karlson*, 311 F.2d 581, 583, 136 USPQ 184, 186 (CCPA 1963) and *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975). Reversing the Munson elements so the user selects the difficulty level after he answers a question is also an obvious modification within the level of ordinary skill in the art. See *In re Gazda*, 219 F.2d 449, 452, 104 USPQ 400, 402 (CCPA 1955).

Claim Rejections - 35 USC § 103

Applicant(s) argue(s) that Parry's invention in USPN 6,077,085 does not teach the invention of the subject application for providing hints as described in claims 1 and

32 and after the user answers a question to select the next question difficulty level as described in claims 6 and 32 (Amendment REMARKS page 15, paragraph 1).

Applicant's arguments have been fully considered but they are not persuasive. The examiner considers amended claims 1 and 6 as anticipated by and obvious over Munson's teachings in the Abstract, Figs. 1A-1B and column 3, lines 42-47. When Munson is modified as taught in Figs. 4-5, 7, 14-15 and column 16, lines 8-67 of Parry and page 135, section 5 of Jerinic "OBOA model of explanation module in intelligent tutoring shell" for the purpose of optimizing the level of challenge for all learners as well as compensating for errors in the question or response expected, Abstract and page 134, right column, paragraph 2, respectively, the invention of claim 32 would have been obvious to one of ordinary skill in the art at the time the invention was made.

As set forth above with regards to Munson, Parry and Jerinic, the items listed explicitly and inherently teach each element of the applicants' claimed limitations. Applicants have not set forth any distinction or offered any dispute between the claims of the subject application, Munson's Computer game teaching method and system, Parry's Technology assisted learning and Jerinic's OBOA model of explanation module in intelligent tutoring shell.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the Office should be directed to Melvin Bell whose telephone number is 571-272-3680. This Examiner can normally be reached on Mon - Fri 7:30 am - 4:30 pm.

If attempts to reach this Examiner by telephone are unsuccessful, his supervisor, Anthony Knight, can be reached on 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.


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MB *J. M. B.*